TWO NEW SPECIES OF GEOMYDOECUS FROM COSTA RICAN POCKET GOPHERS (MALLOPHAGA: TRICHODECTIDAE)[1]

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ABSTRACT—Two new species of *Geomydoecus* Ewing are described and illustrated from material from *Macrogeomys* Merriam taken in Costa Rica: *G.* **setzeri** from *M. underwoodi* Osgood and *G.* **cherriei** from *M. cherrieri* (J. A. Allen).

Three species of *Geomydoecus* Ewing are now recognized from the Central American pocket gopher genus *Macrogeomys* Merriam (Rodentia: Geomyidae). These were described as new species by Price and Emerson (1971) and are *G. costaricensis* from *M. heterodus cartagoensis* (Goodwin), *G. panamensis* from *M. cavator* Bangs, and *G. dariensis* from *M. dariensis* Goldman. *Geomydoecus costaricensis* is the only species of *Geomydoecus* known from Costa Rica, while the other 2 species are from Panama. The fact that each of these 3 species of lice is thus far known only from its type host has led me to suspect that the lice on *Macrogeomys* might show a fairly high degree of host specificity. Thus, I was not too surprised to find that a recent collection of specimens from 2 additional species of *Macrogeomys* yielded lice representing 2 as yet undescribed species of *Geomydoecus*. I thank Dr. Henry W. Setzer of the National Museum of Natural History for enabling me to collect lice from these gopher skins.

Geomydoecus setzeri Price, new species

fig. 1–7

Male: Antennal scape with essentially straight posterior margin; temple margin (fig. 4) with 2 spiniform setae and fine, short, submarginal seta mediad to these. Abdomen (fig. 7) with short tergocentral setae; terminalia as shown. Genitalia (fig. 5) 0.13–0.14 mm wide, with endomeral plate pointed and undivided apically, parameral arch as shown, and sac with 6 prominent spines. Head width, 0.46–0.48 mm; total length, 1.17–1.30 mm.

Female: Temple margin (fig. 3) with short submarginal seta mediad to 2 short marginal setae. Abdomen as in fig. 1; last tergum with 3 long setae grouped together lateroposteriorly; tergocentral setae on VII longer than those on VI; subgenital plate as shown. Genital chamber particles as in fig. 6; genital chamber sac (fig. 2) 0.25–0.30 mm wide, with deeply indented medioanterior margin

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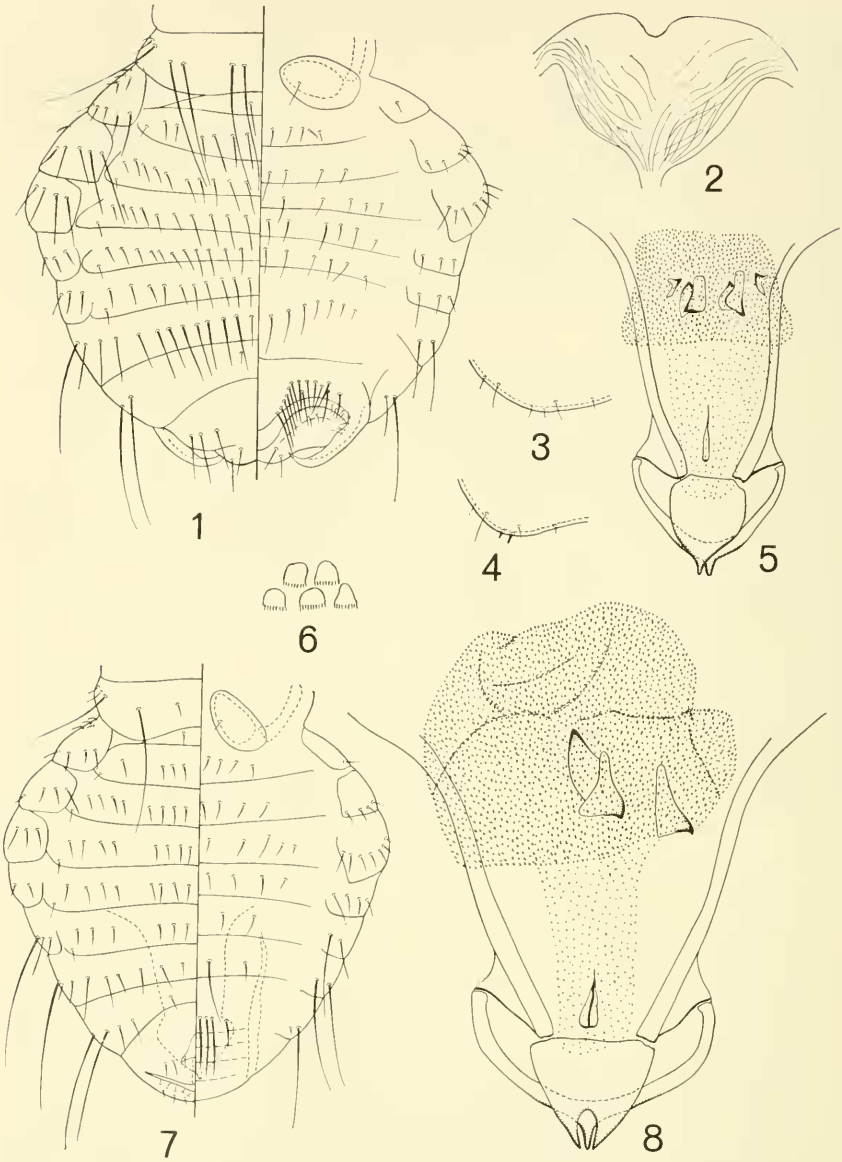

Fig. 1–7. *Geomydoecus setzeri.* 1, dorsal ventral view of female abdomen. 2, female genital chamber sac. 3, female temple margin. 4, male temple margin. 5, male genitalia. 6, female genital chamber particles. 7, dorsal ventral view of male abdomen. Fig. 8. *G. cherriei,* male genitalia.

and with posteriorly directed lines confined mostly to posterior portion. Head width, 0.49–0.53 mm; total length, 1.19–1.31 mm.

Discussion: The male of *G. setzeri*, by its consistently much smaller dimensions and grossly different genitalic structure, bypasses the other 3 species of *Macrogeomys* lice in the key of Price and Emerson (1971) and comes out in couplet 32 as *G. trichopi* Price and Emerson. However, *G. trichopi* has a much longer submarginal temple seta and larger genitalia with different structure of the parameral arch and sac spination; the female of *G. trichopi* also differs in a number of important features from that of *G. setzeri*. The female of *G. setzeri* is quite close to that of *G. costaricensis*, keying to that species in couplet 14 or bypassing that possibility at couplet 12 and becoming lost later in the key. The smaller temple width of *G. setzeri*, the consistent placement of the submarginal temple seta mediad to the 2 marginal setae, and a more pronounced indentation in the anterior margin of the genital chamber sac should separate the females of these 2 species; this combination of characters clearly separates *G. setzeri* from females of all other known *Geomydoecus*.

Type host: *Macrogeomys underwoodi* Osgood.

Type material (all from type host): Holotype male, Jabillo Pirris, Costa Rica, April 22, 1931, C. F. Underwood; in collection of U.S. National Museum of Natural History. Paratypes: 6 males, 5 females, same data as holotype; 2 males, 3 females, same except April 24, 1931; 1 male, 4 females, San Geronimo Pirris, Costa Rica, May 4, 1931, C. F. Underwood.

Geomydoecus cherriei Price, new species

fig. 8

Male: Essentially as for *G. setzeri*, except as follows. Genitalia (fig. 8) much larger, 0.20 mm wide (fig. 5 and 8 drawn to same scale), with apically bifurcate endomeral plate, and sac with only 3 large spines. Larger dimensions: head width, 0.51 mm; total length, 1.48 mm.

Female: Unknown.

Discussion: The only known *Geomydoecus* with a broadly bifurcate endomeral plate and rounded parameral arch with a short mediposterior projection are *G. costaricensis* and *G. cherriei*. However, these 2 species are easily separated by *G. cherriei* having much larger genitalia (0.20 mm vs 0.14 mm wide), the genital sac with only 3 spines, and an endomeral plate shaped as in fig. 8.

Type host: *Macrogeomys cherriei* (J. A. Allen).

Type material: Holotype male, from type host, San Jose, Costa Rica, December, 1922, A. T. Perez; in collection of U.S. National Museum of Natural History.

References

Price, R. D., and K. C. Emerson. 1971. A revision of the genus *Geomydoecus* (Mallophaga: Trichodectidae) of the New World pocket gophers (Rodentia: Geomyidae). J. Med. Entomol. 8:228–257.

PAROXYNA MACULIFEMORATA HERING A SYNONYM OF PAROXYNA MURINA (DOANE) (DIPTERA:TEPHRITIDAE)

Through the courtesy of Dr. Maurice T. James, Washington State University, I examined the lectotype, a male, of *Paroxyna murina* (Doane) (1899, J. N.Y. Entomol. Soc. 7:189, pl. IV, fig. 5) designated by Richard Foote (1966, Proc. Entomol. Soc. Wash. 68:123). This specimen proves to be conspecific with the type of *Paroxyna maculifemorata* Hering (1947, Siruna Seva. 6:6, fig. 2) which I had on loan from the British Museum (Natural History).

Hering's description and wing figure for the male of *maculifemorata* correspond very well to the characters exhibited by *murina*. Examination of the type of *maculifemorata* revealed the specimen to be only in fair condition because of a greasy covering on part of its wings and body which obscured its pollinosity. Foote's designated lectotype of *murina* is in good condition and agrees in all the important characters described by Doane.

I therefore conclude that *Paroxyna maculifemorata* Hering, 1947, is a synonym of *Paroxyna murina* (Doane), 1899. (New synonymy.)

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